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The University Matriculation Board
Ontario

MIDSUMMER EXAMINATIONS
1918

Reports of the Matriculation
Associate Examiners

RE

The Character of the Candidates' Answers
AND
The Teaching of the Subjects in the Schools

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PREFATORY NOTE

The University Matriculation Board here presents in a separate circular the information which last year was published within the same covers as the Reports of the Departmental Associate Examiners. This circular consists mainly of a summary of the chief criticisms offered by the Matriculation Associate Examiners of the answers of candidates to the questions set in the various subjects for matriculation in June, 1918. In a few cases the comments of the Examiner-in-Chief are added. The Board is of the opinion that a careful consideration of these criticisms cannot fail to prove useful to teacher and pupil alike. It is assumed that copies of the question papers on the answers to which the criticisms are based are found in each school.

Pass Matriculation

ENGLISH LITERATURE

1. The handwriting was often very poor, and at times illegible. Generally there was insufficient attention to neatness.
2. The following mistakes in spelling occurred frequently: "ryhme", "Christian", "alright"; the doubling of consonants, e.g., "occurs"; "practice" for the verb "practise", and "effect" for "affect".
3. Punctuation was very poor.
4. The sentence structure was faulty, and sometimes totally disregarded.
5. There was a noticeable lack of *conciseness* in the answers.
6. The memory work was well done.

ENGLISH COMPOSITION

1. As to handwriting, spelling, and punctuation, the same faults were present as in the answers to the questions in English Literature. Apostrophes and hyphens were often omitted, and capital letters misused.
2. The sentence structure showed a misconception of the true nature of a sentence.

HISTORY

1. There was a pronounced tendency on the part of candidates to give brief summaries instead of connected answers. Such a tendency is most unfortunate, especially on papers where liberal options are given. Students should be warned by teachers against this method.
2. On many good papers and on almost all poor ones, lamentable ignorance of even approximate dates was shown. In the Ancient History very frequently the date given would be two or three centuries before or after the occurrence of the event.

ALGEBRA

The majority of candidates appeared to find the Algebra fairly easy. Many confused an expression with an equation and left out the denominator where it should have been retained. The term "cross multiply" appears to be very carelessly used. We advise dropping it altogether. Instead say "clear of fractions".

Pupils should have it impressed on them that as long as the different parts of an expression are connected by plus or minus signs it is not factored.

The different questions were answered as follows:—

1. (a) Very well done by most; a few ended with an expression of the 6th degree.
 - (b) Many do not understand the use of brackets.
2. Very well done, although often the necessary tests were not applied to make sure of the H.C.F.
3. The usual mistakes in factoring were found.
4. (a) Fairly well done. Candidates often used the term "cross multiply" where it did not apply.
 - (b) Well done, but few thought it necessary to verify, or else they did it mentally.

(c) Failure to verify the roots caused most to give 4 as a root without any explanation of the condition under which it might be considered a root, or rejected as extraneous.

5. Well done.
6. (a) A great many failed to get this. All sorts of errors were found.
(b) Many, in fact most, gave only one value for "a".
7. Many had difficulty in getting the equations.
8. Fairly well done.

The Examiner-in-Chief adds the following:—

The difficulty with 6 (b) shows that the study of the quadratic and of algebraic theory in general is much too conventional. A candidate seems to think that a quadratic equation has two roots if it is proposed as an equation for solution, but that one is enough if it occurs in the course of a problem. Question 6 (a) also showed that a question so easy as to yield to almost any mode of attack could seldom be done, merely because it did not represent any standard conventional type of question. Both the teaching and the examining lay too much stress on the formal processes which should be regarded as of no value except as a preliminary to the solution of problems.

GEOMETRY

The answer papers lead to the belief that some teachers depend too much on getting up the propositions in the text-book, and neglect deduction work. That is neither good teaching nor good policy. The paper this year was only a little more than fifty per cent. book work.

It is evident that there is still lack of uniformity in the treatment of parallels. We recommend that the order in which the propositions come in the authorized text be followed, and the treatment based on Playfair's Axiom. When putting down work pupils should not put the figure on one page, and the demonstration, or part of it, on the next.

It may be of interest to know how the different questions were answered.

1. (a) Very few got this. The test expected might be called the *turn over* test.
(b) Done much better than (a).
2. Not well done. Many thought that the angles of a triangle are proportional to the opposite sides and made one angle twice the other.
3. (a) Not well done. Many gave a definition of parallel lines, and others who used Playfair's Axiom correctly in (b) did not give it in (a).
(b) Fairly well done, but many confused it with its converse.
4. Well done.
5. Well done.
6. Only fairly well done. Too many tried to do it by placing one triangle on the other. Teachers should call their pupils' attention to this.
7. This was not as well done as it should have been.
8. Very few did this correctly, although a few very good proofs were given.
9. Scarcely any of the candidates got this.

PHYSICS

The answers were generally satisfactory and indicated a high standard of teaching. Reference may be made to the following questions:

1. (a) In many answers the electrification of the electroscope was omitted or the method was very indefinite.

2. (a) The students did not recognize that the needles became permanently magnetized.
4. (b) The formula for parallel arrangement was not clearly understood.
7. The explanations in both parts (a) and (b) were very poor.
8. (b) Bundles of rays, to indicate how the image is seen, were omitted.
9. (a) Diagrams were poor in every respect. Especial emphasis should be given to the subject referred to in 8 (b), namely, in the drawings showing how images in spherical mirrors are actually seen. This might be extended to lenses also.

CHEMISTRY

The answers were generally satisfactory and show that the teaching of the subject is satisfactory, but more attention should be given to the determination of chemical equations from experimental data.

Reference may be made to the following questions :

1. (c) Candidates did not prove the presence of sulphuric acid after reduction had taken place.
3. (a) Quantities were omitted in this definition, solution only being defined.
4. (a) The terms exothermic and endothermic were not generally understood.
(b) The definition of valency was too often reversed.
5. (a) The formation of gases by solids and liquids in the production of explosives was generally omitted.
6. The candidates failed to appreciate that water formed under conditions in (a) was in a gaseous condition and in (b) was condensed.
7. Attempted by only a few and not many of these were successful.

LATIN AUTHORS

1. In many cases the spelling was poor. This was noticed especially in (i) names of cases and (ii) proper names.
2. Weakness was shown in forming tenses, wrong verb stems being used. This betrays lack of training on a most important part of the Grammar.
3. Questions on accidente were on the whole poorly answered and the scansion was not well done.
4. Teachers are reminded that full marks for translation are not given if the English is faulty. On the other hand, there should not be too great deviation from the Latin order, except where it is necessary.
5. It is clear from the majority of the answers that the pupils are not taught to distinguish the different kinds of place (*place at or in which*, *place from which* and *place to which*).
6. In very many cases the writing was rather illegible. It is important that there be no possible doubt as to whether an "i" or an "e", or, again, whether a "u", or an "n", is meant.

LATIN COMPOSITION

1. As in the Authors paper, the parsing was the weak point, though it was surprising how many candidates made nonsense out of both passages from Caesar.
2. Very few were able to explain the impersonal use of the verbs "discedi" and "neceretur", or to give the rule correctly.
3. The difference between the Gerund and Gerundive was given very well by the majority of the candidates.

GREEK AUTHORS

1. Fairly well answered.
2. The scansion especially well done.
3. The translation of Xenophon was poorer than that of Homer. Candidates are not able to drop the Greek particles in translation.
4. Questions 6 (a) and 8 (a) were very poorly answered; yet so many marks are now given for questions of this kind that candidates cannot obtain a good percentage without more attention to the story of the poem.
5. Complete identifications were seldom given, and candidates lost appreciably by their carelessness in this.

GREEK COMPOSITION

1. As a rule, well answered.
2. The principal parts of verbs were poorly given and apparently in many cases had not been taught at all.
3. Too many candidates abbreviated their declensions in (1), and lost marks because of resulting mistakes or ambiguities.
4. The omission of breathings not so common as in 1917.

FRENCH

1. There were some very bad mistakes in English grammar and in the spelling of English words. Such errors as "learned" for "taught" or "seen" for "saw" occurred frequently.
2. Candidates made much better marks on the "Authors, Grammar and Sight Translation" than on the "Composition" paper.

GERMAN

1. The translation of the prescribed authors was, on the whole, well done. Candidates should be warned, however, against giving too free a translation. The translation at sight was good, partly because the examiner gave the key word to the passage.
2. There was evidence that the translation of the prescribed authors had been stressed at the expense of the study of grammar, especially of the mood, tense, and position of the verbs.
3. As a result of the candidates' imperfect knowledge of grammar, the papers in composition were not so good as last year. The following were some of the outstanding defects:
 - (1) Very poor declension of adjectives.
 - (2) The frequent use of the wrong auxiliary with *kommen*, *bleiben*, *zurückkehren*.
 - (3) The use of the wrong case after *mit*, *zu*, *durch*.
 - (4) Frequent misplacing of the verb in compound-complex sentences.
 - (5) Confusion as to the meanings of the following: *wenn* and *ob*; *dass* and *das*; *wer* and *der*; *nach Hause* and *zu Hause*; *ihr* and *sein*; *alle* and *alles*; *kennen*, *wissen*, and *können*; *von ungefähr*, *um*, *beinahe*; *etwas*, *einige*, *ein wenig*, and *ein paar*.

Honour Matriculation

ALGEBRA

The marks received by the candidates would indicate that the students writing this examination were not so well prepared as those writing on the Faculty Entrance Algebra. The answers to question 2 (a), show clearly that the students do not know what a real quantity is. Many candidates omitted the roots, 0 and $+ 2 \sqrt{2}$, thinking these were not real quantities. In the question on annuities, many candidates tried to remember the formula for the deferred annuity and then substituted in it. Students should be taught to write down the series each time and sum it correctly.

The Examiner-in-Chief adds the following:—

Much too great a stress has been laid on the memorization of proofs and processes, as witness the tedious repetition of Hall and Knight's phraseology in 5 (a) and 6 (a) and the attempts to answer 6 (b) and 8 by quoting a ready-made formula. Much of the work expended over formal theory might be better applied to testing the students' appreciation of those logical steps which occur at every stage of the work, and teaching him to see the unity of the subject in recognizing the same principles under various aspects.

GEOMETRY

Very satisfactory both as regards the answers of the pupils and the teaching of the subject.

TRIGONOMETRY

Candidates are not thoroughly taught the subject of logarithms. Many of them made the mistake of taking logarithms in dealing with the equation $\cos A = \frac{b^2 + c^2 - a^2}{2bc}$.

In taking the functions of allied angles, as in proving $\cos(\pi - 2) = -\cos \theta = \sin\left(\frac{3\pi}{2} + \theta\right)$ students neglected to compare the triangles obtained in the construction of these angles.

The Examiner-in-Chief adds the following:—

When two triangles are said to be congruent, or similar, they should be named in terms of homologous sides read in proper order. There were many departures from this.

The minus sign prefixed to the line OM_1 , read from O toward the left, does not mean that OM_1 is to be taken in a negative sense, but that it is to be taken in a sense opposite to that in which it is now written, viz., O to M_1 ; in other words, $-OM_1$ means M_1O . The failure to understand this was quite marked in most of the papers.

FRENCH AUTHORS

Candidates should pay more attention to spelling and to the use of prepositions in English.

The candidates are inclined to think they must translate the French partitive into English in all cases,—due to stressing the use of it in French.

The English used in translation was generally satisfactory.

FRENCH COMPOSITION

In many cases sheer carelessness in the answering of questions accounts for the low marks of the candidates.